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A new species of the genus *Myrmarachne* (Araneae: Salticidae) from Tamsui, Taiwan

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Abstract — A new species of ant-mimicking jumping spiders, *Myrmarachne tamsuiensis*, is described using specimens from Tamsui, Taiwan. The female of the species is in external appearance similar to that of *M. vulgarisa*, whose female is known. However, they are distinguishable from each other mainly by the structure of the epigyne.

Key words — Salticidae, *Myrmarachne*, taxonomy, new species, Taiwan

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Introduction

Taiwan is a continental island, with broad connection to the Chinese mainland at glacial low sea level, and its fauna is essentially continental (Corlett 2009). The taxonomy of *Myrmarachne* in Taiwan has been studied mainly by Strand (1910), Matsumura (1911), Saito (1933), Kayashima (1943) and Yamasaki & Huang (2012). According to their studies, six species are known from Taiwan officially. However, Huang (master's thesis in 2004, unpublished data) records eleven species from Taiwan, and three of them are undescribed species. It suggests that *Myrmrachne* fauna of Taiwan has not been revealed sufficiently.

In Taiwan, I collected an interesting *Myrmarachne* species, which occurs in a grassland area. The species is not identical with any known species of Taiwan. I therefore describe it as a new species.

Materials and methods

All measurements follow Yamasaki (2010) and are given in millimeters. Chelicera length is not shown for females. The type material designated in the present paper is deposited at the National Museum of Natural Science, Taichung, Taiwan (NMNS). The abbreviations used in the present paper are as follows: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye; pv, prolateroventral; RTA, retrolateral tibial apophysis of male palp; rv, retrolateroventral.

Myrmarachne tamsuiensis sp. nov.
(Figs. 1–12)

Type material. Holotype (NMNS), male, a grassland area along a cycling road near the seacoast, Tamsui District, New Taipei City, TAIWAN, 26 March 2012, T. Yamasaki & T. Suguro leg. Paratype: 1 female, same data as the holotype.

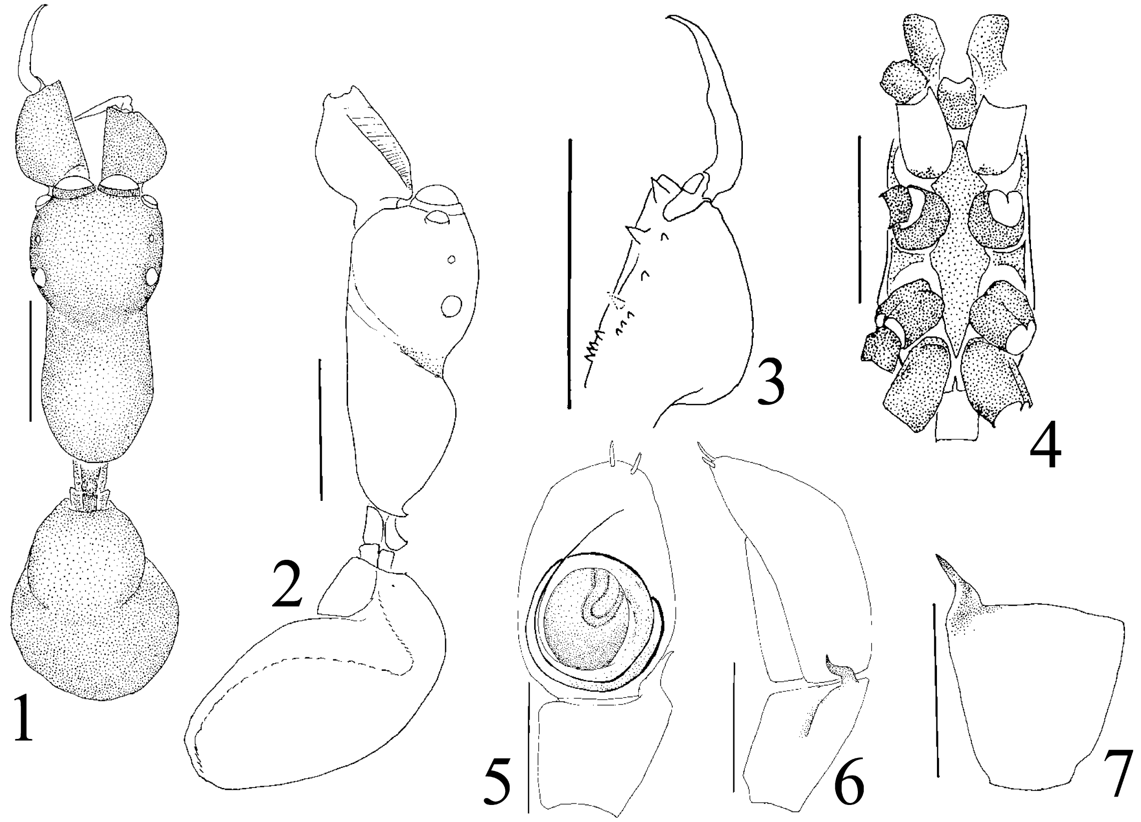
Non-type material examined. 2 juveniles (male and female), same data as the holotype.

Diagnosis. Body blackish, and covered with white setae; body length approximately 4.5–6.0 mm. Pedicel bearing distinct protuberance on anterodorsal segment. Male chelicera distinctly shorter than carapace; in dorsal view its outer edge strongly convex. Male fang short without tooth-like apophysis. In female copulatory openings oval; median structure in front of epigastric furrow indistinct or absent; spermathecae twisted.

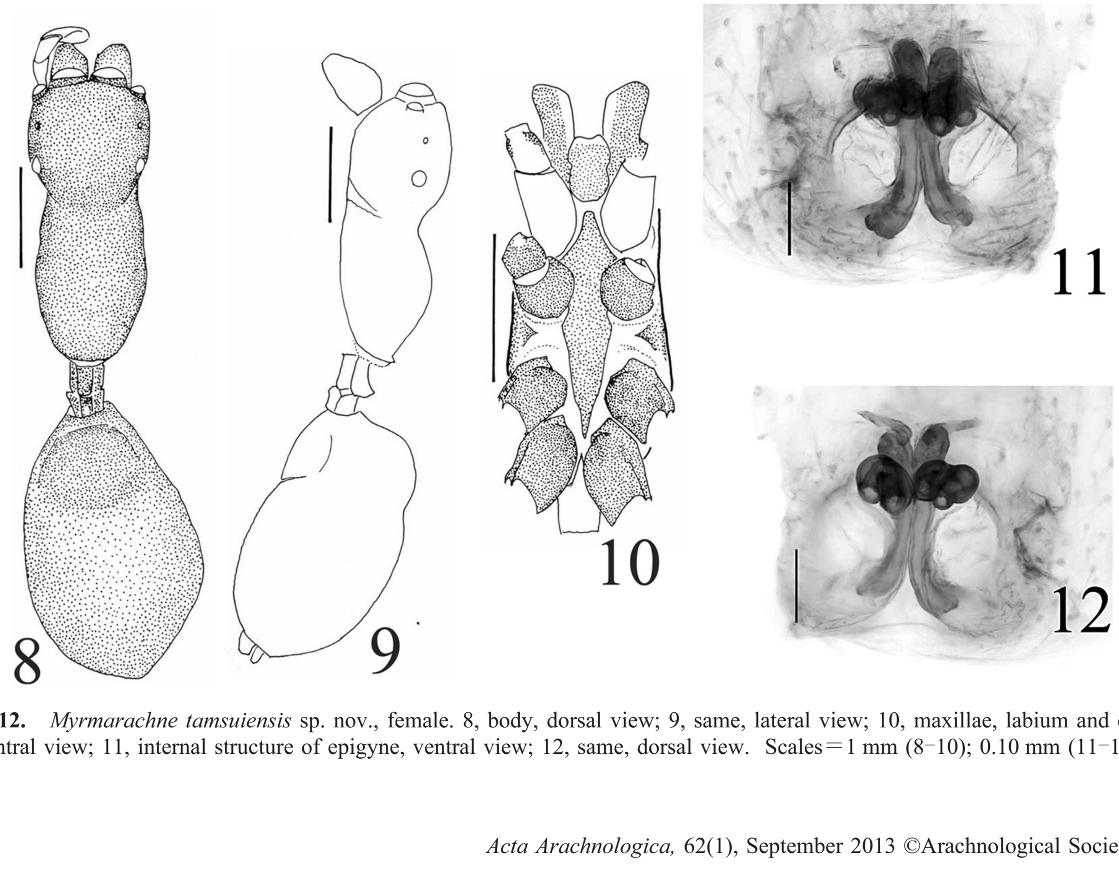
Measurements (male/female). Carapace length 2.17/2.73, width 1.10/1.20. Chelicera length of male 0.94. ALE–PLE 0.77/0.88; ALE–PME 0.40/0.43. Width of eye row I 1.03/1.15; II 0.97/1.07; III 1.03/1.17. Eye size of AME 0.33/0.38; ALE 0.16/0.17; PME 0.06/0.06; PLE 0.16/0.23.

Male (Figs. 1–7). Cephalic area weakly convex dorsally, higher than thoracic area. With carapace in lateral view, dorsal concavity present between cephalic and thoracic areas. Dorsum of thoracic area convex anteriorly, then sloping downward posteriorly with posterior edge strongly reflexed upward. Chelicera distinctly shorter than carapace, with seven prolateral and five retrolateral teeth on its venter; in dorsal view its outer margin strongly convex and inner margin almost straight. Fang short without tooth-like apophysis. Pedicel short, and bearing distinct protuberance on anterodorsal segment. Abdomen oval with weak constriction in anterior third; dorsal scutum broad, covering entire dorsum, and each lateral margin incised at constriction.

Palp (Figs. 5–7). With palp in dorsal and ventral views cymbium oval, with two apical spines. Tegulum round with strongly curved seminal reservoir on anterior part of tegulum. Embolus forming two round coils; embolus coils occupying almost half of venter of cymbium, with more ventral coil nearly completely overlapping inner coil. RTA



Figs. 1–7. *Myrmarachne tamsuiensis* sp. nov., male. 1, body, dorsal view; 2, same, lateral view; 3, chelicera, ventral view; 4, maxillae, labium and coxae of legs, ventral view; 5, left palp, ventral view; 6, same, retrolateral view; 7, tibia of left palp, dorsal view. Scales = 1 mm (1–4); 0.25 mm (5–7).



Figs. 8–12. *Myrmarachne tamsuiensis* sp. nov., female. 8, body, dorsal view; 9, same, lateral view; 10, maxillae, labium and coxae of legs, ventral view; 11, internal structure of epigyne, ventral view; 12, same, dorsal view. Scales = 1 mm (8–10); 0.10 mm (11–12).

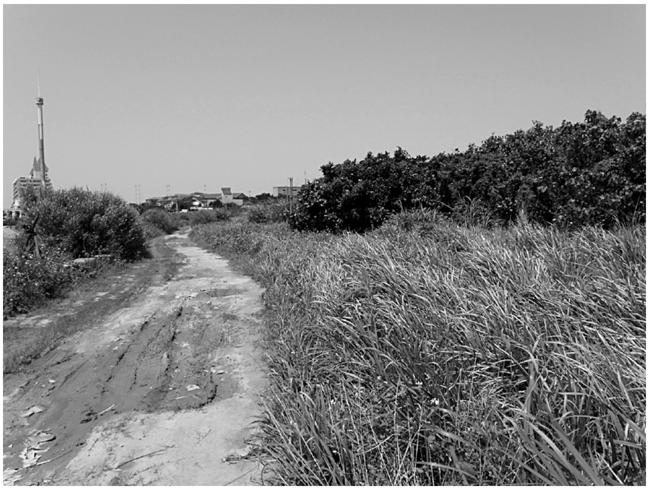


Fig. 13. Type locality of *Mymrachne tamsuiensis* sp. nov., a grassland area along a cycling road near the seacoast, Tamsui, New Taipei City, Taiwan.

well developed; with palp in lateral view RTA s-curved with hooked tip. Flange of RTA not well developed.

Number of spines on legs. Patella I pv 0, rv 1; tibia I pv 5, rv 4 (one of four spines is lost, but its socket is visible); metatarsus I pv 2, rv2; tibia II pv 1, rv 3; metatarsus II pv 2, rv 2.

Coloration and pilosity. Carapace black, and covered with white setae; lateral area between cephalic and thoracic parts slightly whitish, and whitish area extending from above coxa I to near dorsal concavity of carapace. Chelicera blackish brown, and almost without hairs. Maxilla and labium brownish cream, and tinged with black. Sternum pale brown, and tinged with black. Coxa I cream or white; coxae II and III black; coxae IV cream, and almost tinged with black. Abdomen blackish brown, and densely covered with fine setae.

Female (Figs. 8–12). Carapace, sternum and pedicel almost same as in male. Chelicera bearing five prolateral and six retrolateral cheliceral teeth on its venter. Abdomen oval, without dorsal scutum.

Epigyne (Figs. 11–12). Copuratory openings oval. Median structure in front of epigastric furrow indistinct or absent. Sclerotized copulatory ducts starting behind copulatory openings at around median part of its posterior margin, then running between copulatory openings; sclerotized ducts connecting to tube-like spermathecae in front of copulatory openings, with complex twists.

Number of spines on legs. Patella I pv 0, rv 1; tibia I pv 5, rv 6; metatarsus I pv 2, rv 2; tibia II pv 3, rv 3; metatarsus II pv 2, rv 2.

Coloration and pilosity. Carapace almost same as in male; lateral area between cephalic and thoracic parts more densely covered with white setae than that of male. Chelicera brown. Maxilla, labium, sternum, coxae and abdomen similar to those of male.

Etymology. The specific name is derived from the name of district, to which the type locality belongs.

Remarks. The species was collected from a grassland area along a cycling road near the seacoast in Tamsui, New Taipei City (Fig. 13).

The species is in external appearance similar to *Myrmarachne kuwagata* Yaginuma 1967 in the field, but under a microscope they are clearly distinguishable from each other. The species does not have a projection on the fang, but *M. kuwagata* has a distinct long projection on the fang. *Myrmarachne vulgarisa* Barrion & Litsinger 1995, whose female is known, is also similar to the species. However, they are distinguished from each other by the structures of the epigyne and the number of ventral spines on tibia I. Although I did not examine the holotype of *M. vulgarisa*, the median structure of the epigyne is recognizable in the original description. *Myrmarachne tamsuiensis* is lacking in the median structure of the epigyne, or the structure is indistinct. In the number of ventral spines on legs, *M. vulgarisa* bears nine spines on tibia I, but *M. tamsuiensis* bears eleven spines.

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